

NATURE IN EDUCATION

by Maria Montessori

This piece of writing addresses the “boundless” garden created through the web of foresight and patience combined with the spontaneous activity necessary for growing food and harvesting the bounty. Most will be familiar with this unique writing by Montessori who suggests that it is not the work and actual produce of the garden but the activities of “living naturally” that enhance the child’s development.

At the present time, however, and in the circumstances of modern society, children live very far from nature and have few opportunities of coming into intimate contact with, or having any direct experience of, it.

For a long time it was thought that nature had only a moral influence on the education of a child. Efforts were made to develop a sensible response to the marvels of nature, to flowers, plants, animals, landscapes, winds, and light.

Later an attempt was made to interest a child in nature by giving him little plots of land to till. But the concept of living in nature is still more recent in a child’s education. As a matter of fact, a child needs to live naturally and not simply have a knowledge of nature. The most important thing to do is to free the child, if possible, from the ties which keep him isolated in the artificial life of a city. Today child hygiene contributes to the physical education of children by introducing them to the open air in public parks and by leaving them exposed to the sun and water of a beach. Some timid attempts at freeing children from the excessive burdens of city life may be found in the permission given to children to wear simpler and lighter clothes, to go about in sandals or barefooted. Experience has shown that the only means of curing children from tuberculosis and rickets in modern sanatoria is to expose them to nature and to make them sleep in the open air and to live in the sun. When we reflect on this, it should be clear that normal and strong children should not only be able to resist an exposure to nature, but that they would be greatly benefited by it. But there are still too many prejudices in the



In the school garden, Sri Lanka, 1940s

way. We have readily given up our own freedom and have ended up loving our prison and passing it on to our children. Little by little we have come to look upon nature as being restricted to the growing of flowers or to the care of domestic animals which provide us with food, assist us in our labours, or help in our defence. This has caused our souls to shrink and has filled them with contradictions. We can even confuse the pleasure that we have in seeing animals with that of being near a poor animal destined to die so that it may feed us, or we admire the beauty of the songs of birds imprisoned in little cages with a kind of hazy love of nature. We even think that a tray full of sand from the sea should



"The gardener was a retired man from the village. He worked five days a week. He enjoyed the children and they enjoyed him as he taught them. It is always a great experience to bring the young and old together. Many times it is the volunteer who makes the best teacher," Margot Waltuch. Courtesy of Margot Waltuch collection

be a great help to a child. The seashore is often thought to be educational because it has sand like that in a child's box. Imprisoned as we are in such a confused world, it is no wonder that we come to some absurd conclusions.

Actually, nature frightens most people. They fear the air and the sun as if they were mortal enemies. They fear the frost at night as if it were a snake hidden in the grass. They fear the rain as if it were fire. Civilized man is a kind of contented prisoner, and if now he is warned that he should enjoy nature for his own health, he does so timidly and with his eyes on the alert for any danger. To sleep in the open, to expose oneself to the winds and to the rains, to defy the sun, and to take a dip in the water are all things about which one can talk but which one does not always put into practice.

Who does not run to close a door for fear of a draught? And who does not shut the windows before going to sleep, especially if it is winter or it is raining? Almost everyone believes that it is dangerous and requires a heroic effort to take very long walks in the open country in rain or shine and rely simply on the shelter which nature affords. It is said that one must become accustomed to such efforts, and so no one moves. But how is one to become accustomed to such activities? Perhaps little children should be so conditioned. No. They are the most protected. Even the English, with their enthusiasm for sports, do not want their children to be tired by nature and fatigue. Even when they are quite large, a nurse pushes them in carriages to some shady spot when the weather is good, and she will not let them walk far or act as they please. Where people engage in sports, these become veritable battles among the strongest and most courageous youths, the very ones who are called to arms to fight the enemy.

It would be too soon for us to say: Let the children be free; encourage them; let them run outside when it is raining; let them remove their shoes when they find a puddle of water; and, when the grass of the meadows is damp with dew, let them run on it and trample it with their bare feet; let them rest peacefully when a tree invites them to sleep beneath its shade; let them shout and laugh when the sun wakes them in the morning as it wakes every living creature that divides its day between waking and sleeping. But, instead of this, we anxiously ask ourselves how we can make a child sleep after the sun has risen, and how we can teach him not to take off his shoes or wander over the meadows. Where, as the result of such restraints, a child degenerates, and, becoming irked with his prison, kills insects or small harmless animals, we look on this as something natural and do not notice that his soul has already become estranged from nature. We simply ask our children to adapt themselves to their prison without causing us any trouble.

The strength of even the smallest children is more than we imagine, but it must have a free play in order to reveal itself. In a city a child will say that he is tired after a brief walk, and this leads us to believe that he lacks strength. But his sluggishness comes from the artificiality of his environment, from ennui, from his awkward clothing, from the pain which his small feet suffer from their leather shoes as they strike the bare pavement of the city streets,

and from the enervating example of those who walk about him silent, indifferent, and without a smile. A club which he might join, or attractive clothes which might bring him admiration, are nothing to him. He is on a leash. He is ensnared by laziness and would like to be dragged along.

But when children come into contact with nature, they reveal their strength. Normal children, if they have a strong constitution and are well nourished, can walk for miles even when they are less than two years old. Their tireless little legs will climb long steep slopes in the sunshine. I remember how a child of about six once disappeared for several hours. He had set out to climb a hill, thinking that if he arrived at its summit he would be able to see what lay on the other side. He was not tired, but

disillusioned in not having found what he sought. I once knew a couple who had a child barely two years old. Wishing to go to a distant beach they tried to take turns carrying him in their arms, but the attempt was too tiring. The child, however, then enthusiastically made the trip by himself and repeated the excursion every day. Instead of carrying him in their arms, his parents made the sacrifice of walking more slowly and of halting whenever the child stopped to gather a small flower or saw a patient little donkey grazing in a meadow and sat down, thoughtful and serious, to pass a moment with this humble and privileged creature. Instead of carrying their child, these parents solved their problem by following him. Only poets and little children can feel the fascination of a tiny rivulet of water flowing over pebbles. A child at such a sight



Gardening at Blackfriars School, Sydney, New South Wales, 1914

will laugh with joy and want to stop to touch it with his hands as if to caress it.

I would suggest that you take up in your arms a child that has not yet begun to walk. On a country road from which may be seen a great and beautiful expanse, hold him in such a way that his back is to the view. Stop there with him! He will turn around and enjoy the beauty of the scene even though he cannot yet stand upright on his own feet and his tongue cannot as yet ask you to pause. Have you ever seen children standing seriously and sad about the body of a little bird that has fallen from its nest, or watched them run back and forth asking and reporting what has happened with deep concern? Well, these are the children who can soon degenerate to the point where they steal eggs from birds' nests.

Like everything else, a feeling for nature grows with exercise. We certainly do not communicate it by a pedantic description of exhortation made to a listless and bored child shut up within the walls of a room and who has become accustomed to see or hear that cruelty toward animals is just a part of life. But experience strikes home. The death of the first dove killed intentionally by a member of his family is a dark spot in the heart of almost every child. We must cure the unsuspected wounds, the spiritual ills that already afflict these charming children who are the victims of the artificial environment in which they live.

THE PLACE OF NATURE IN EDUCATION

Education in school can fix the attention of a child on special objects which will show exactly how far he has been able to stir up within himself a feeling for nature or will arouse within him latent or lost sentiments. Here, as in every other kind of activity, the function of the school is to supply him with interesting information and motives for action. A child, who more than anyone else is a spontaneous observer of nature, certainly needs to have at his disposal material upon which he can work.

Care for Others

Children have an anxious concern for living beings, and the satisfaction of this instinct fills them with delight. It is therefore easy to interest them in taking care of plants and especially of animals. Nothing awakens foresight in a small child, who lives as a rule for the passing moment and without care

for the morrow, so much as this. When he knows that animals have need of him, that little plants will dry up if he does not water them, he binds together with a new thread of love today's passing moments with those of the morrow.

One should watch little children when, one morning, after they have for many days placed food and water with loving care near brooding doves, they see the results of their labours. On another day they see a number of dainty chicks that have come from the eggs which a hen has covered with her wings for so long. The children are filled with feelings of tenderness and enthusiasm, and there is born in them a desire to give further help. They collect little bits of straw, threads of old cotton cloth, or wisps of wadding for the birds nesting under the roof or in the trees in the garden. And the chirping that goes on about them tells them thanks.

The metamorphoses of insects and the care which mothers bestow upon their offspring are objects of patient observation on the part of children, and they often give rise to an interest that surprises us. Once a small child was so struck by the changes undergone by tadpoles that he could describe their development, reporting the various phases in the life of a frog like a miniature scientist.

Children are also attracted by plants. One Children's House did not have any land that could be tilled, so flower pots were set out all around a large terrace. The children never forgot to water the plants with a little watering can. One morning I found them all seated in a circle on the floor around a magnificent red rose that had opened up during the night. They were silent and peaceful, completely absorbed in contemplation.

Another time a little girl kept looking down from a terrace in obvious excitement. Her mother and her teachers had seen to it that she had grown up with a love for flowers and gardens, but now she was attracted by something more. "Down there," she told her mother, "there is a garden of things to eat." It was an orchard, which did not strike the child's mother as being at all remarkable, but which had nevertheless filled her tiny daughter with enthusiasm.

Prejudices About the Gardens

Our minds are prejudiced even with respect to nature, and we find it very difficult to understand.

Our ideas about flowers are too symbolic, and we try to mould a child's reactions to our own instead of following his lead in order to interpret his own real tastes and needs. This is why even in gardens children have been forced to imitate the artificial activities of adults. They find that it takes too long to place a seed in the earth and wait for a little plant to appear; and further the task itself is too small for them. They want to do something big and to bring their activities into immediate contact with the products of nature.

Children indeed love flowers, but they need to do something more than remain among them and contemplate their coloured blossoms. They find their greatest pleasure in acting, in knowing, in exploring, even apart from the attraction of external beauty.

Their Favourite Work

Our experiences have led us to a number of conclusions different from those which I myself once had, and we have been led to these by children who have been left free to make their own choices.¹

The most pleasant work for children is not sowing but reaping, a work, we all know, that is no less exacting than the former. It may even be said that it is the harvest which intensifies an interest in sowing. The more one has reaped, the more he experiences the secret fascination of sowing.

One of the brightest experiences is that of harvesting grain or grapes. The reaping of a field of wheat, the gathering of the grain into sheaves to be bound with bright-coloured ribbons, has been most successful and can become the occasion for beautiful farm festivals. The care of the vines, the cleansing of the grapes, and the gathering of the fruit into beautiful baskets can also give rise to various feasts.



Children caring for the aviary, Barcelona, 1930s

Fruit trees provide similar types of work. Even the smallest children like to gather the olives, and they perform a truly useful work in the diligent search they make for fallen fruit which they put in their baskets. A hunt for strawberries hidden under the leaves of the vines is no less pleasing than looking for fragrant violets.

From these experiments the children derive an interest in the sowing of seeds on a larger scale, as for example, the sowing of a field of wheat with all its various operations. Only an adult can layout the furrows, but the children can pile up the little heaps of grain to be sown. They can then divide this into little baskets and scatter it along the rows. The growth of so many frail and tender plants gives great pleasure to the eye and to the mind. The uniform quality and the patterns made by the long parallel lines seem to emphasize their growth. Grandeur seems to come from the massing together of single items which are of themselves of little interest. The yellow stalks that toss about

¹As the result of further experiments by Dr. Mario Montessori the scientific education of children in nature studies has been further elaborated. It is impossible here to take into account the mass of work and the surprising amount of material that has been suggested solely by the interests and activities of the children themselves. It is enough to note that this includes much with respect to the shape and classification of animals and plants, and this prepares them for further study in physiology. Careful attention has also been given to the preparation of aquaria and plots for the growing of vegetables, which should be present in every school. These means for study have led to a spontaneous and purposeful exploration of nature and to a number of discoveries made by the children themselves. They have satisfied the need which children have to exercise their senses and their powers of motion and have laid the foundations for further far-reaching developments in elementary schools. It provides an answer to the problem of satisfying the interests of older children without forcing them to reluctantly assimilate ideas and terms when their interest in these has already disappeared. A younger child readily and enthusiastically lays the foundation which the older child then uses to satisfy his own higher interests.

in the wind and grow until they are at the height of a child's shoulder entrance the little group waiting for the harvest. Although our small fields were sown for the making of altar breads, we were nevertheless able to conclude that a country life is more suitable for a child than philosophy and the symbolism of flowers.

Little plots of fragrant plants can also have a practical interest. A child's activity then consists in searching for, distinguishing, and gathering the plants with different scents. An exercise in distinguishing things that look alike and in seeking out a scent rather than a flower is exacting and affords the satisfaction of discovery.

Flowers are, of course, also interesting, but gathering them is more unnatural than gathering the fruits of the earth that grow from them. Flowers seem to call insects to themselves rather than men to assist them in carrying out their eternal mission. Actually, children who have been taught how to satisfy their spiritual needs often will sit down near flowers to admire them, but they will soon get up

and go in search of something to do since it is their own activity that causes the buds of their charming little personalities to unfold.

Simplicity

Work for a child must possess some variety within itself. A child does not have to know the reasons for sowing or reaping to have his interest aroused. He will readily undertake very simple actions which have an immediate end or which permit him to use some special effort. He will, for example, gladly pluck weeds from paths or furrows, sweep up dried leaves, or carry away an old branch. In a word, to have a field of activity and occasions for new experiences and difficult enterprises bring satisfaction to the animating spirit which prompts a child to make its way in the world.

We have pictures showing small children walking without fear among cows and in the midst of a flock of sheep, and others showing them sifting earth and carrying it away in wheelbarrows or heaping up big piles of branches from a tree.



Catalan folk dancing, Spain, 1930s

Because of the lack of a suitable environment, such works as the care of greenhouses, the preparation of water for aquatic plants, the spreading of nets to protect a pool from insects, and the like, are seldom practicable, but they would not be beyond the strength or will of a child.

Our Garden

A further conclusion which we reached from observing children in conditions where they could freely manifest their needs was that of limiting the field or garden to their spiritual needs. The opposite conviction, however, is common, namely, that it is good to give children a limitless space. Such an attitude is due to an almost exclusive regard for a child's physical life. The limits seem to be indicated by the swiftness of his feet. Nevertheless, even if, to be specific, we were to take a racetrack as a spatial limit, we would find it to be considerably more restricted than we had thought. Even in a large field, children always run and play in one spot, in a corner or some narrow space. All living beings tend to find a place for themselves and to keep within its boundaries.

This same criterion is also applicable to the psychic life. Its limits must be found in a mean which lies between an excess and an insufficiency of space

or anything else. A child does not like one of the so-called "educational playgrounds" since it is too small for him. It is a wretched piece of property not even big enough for himself. A child whose needs are satisfied does not care whether something belongs to him or not. What he wants is precisely a sense of satisfaction. He should be able to watch over as many plants as he can come to know, as many as he can remember, so that he really knows them.

Even for us a garden that has too many flowers is a place full of unknowns that are foreign to our consciousness. Our lungs will breathe well there, but the soul is not affected. But neither can a tiny flower bed satisfy us. Its contents are trivial and not sufficient for our needs. They do not satisfy the hunger of the spirit which longs to come into contact with nature. The limits, then, are those which make it our garden, where every plant is dear to us and sensibly helps us to support our inner selves.

The criterion for judging the limits of a child's activities has created a great deal of interest. In many countries attempts have been made to interpret it practically as a garden which corresponds to a child's inner needs. Today, plans for a garden run parallel with those for the building of a Children's House.

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